STRUCTURE 119

This structure is a reinforced concrete, gated spillway with discharge controlled by a stem operated, vertical lift gate. Operation of the gate is automatically controlled so that the gate operating system opens or closes the gates in accordance with the operational criteria. The structure is located on Canal 100C, about 1000 feet west of U.S. Highway 1.

PURPOSE

This structure maintains optimum upstream water control stages in Canal 100C; it passes the design flood (40% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels.

OPERATING CRITERIA:

This structure is operated under automatic control as follows:

When the headwater elevation rises to 5.4 feet, the gate begins to open;

When the headwater elevation rises or falls to elevation 4.7, the gate becomes stationary;

When the headwater elevation falls to 4.2, the gate begins to close.

The automatic operation range was lowered to 4.6 - 4.0 on 6/1/82. On 4/10/92, the design operating criteria were implemented again. The lower automatic operation range may be used during wet conditions.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>400</u> cfs	<u>900</u> cfs
	<u>40</u> % SPF	_100_% SPF
Headwater Elevation	<u>4.4</u> feet	<u>8.0</u> feet
Tailwater Elevation	<u>3.9</u> feet	<u>7.0</u> feet
Type Discharge	uncontrolled submerged	uncontrolled submerged

DESCRIPTION OF STRUCTURE

Type <u>reinforced concrete, gated spillway</u>

Weir Crest

Net Length 12.0 feet

Elevation <u>-2.4</u> feet

Service Bridge Elevation 10.0 feet

Water Level which will by-pass structure 10.0 feet

Gates

Number 1

Size 7.3 ft. high by 12.8 ft. wide

Type <u>vertical slide gate</u>

Bottom elevation of gates, full open <u>5.7</u> ft. Normal

7.2 ft. Maximum

<u>5.0</u> ft.

Top elevation of gates, full closed

Control <u>On-site automatic</u>

Lifting Mechanism

Normal power source commercial electricity

Emergency power source <u>LP gas engine driven generator</u>

Type Hoist direct drive motor, gear connected to stem.

Date of Transfer: March 14, 1966

ACCESS: from U.S. Highway 1 via access road on south bank of C-100C

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level Remote digital upstream and downstream recorder

Gate Position Recorder Remote digital recorder

DEWATERING FACILITIES

Storage West Palm Beach Field Station

Type Stop logs

Size and Number (per bay)

Upstream & Downstream

19 each 8" x 8" X 12'-2" long